

Application Number 09/918,262
Amendment dated November 23, 2004
Responsive to Final Office Action of September 28, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- Claim 1 (Previously Presented):** An illumination device comprising:
- a light emitting diode that emits a radiation pattern, wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode; and
 - a number of light guides positioned to be illuminated by the light emitting diode, each light guide positioned at offset locations relative to the center axis of the light emitting diode wherein each light guide is positioned such that a cross-sectional center of each light guide substantially corresponds to locations of the maximum luminous intensity of the radiation pattern of the light emitting diode.
- Claim 2 (Previously Presented):** The illumination device of claim 1, wherein each light guide provides directional side lighting in a unique direction.
- Claim 3 (Original):** The illumination device of claim 2, wherein the locations of the maximum luminous intensity of the radiation pattern of the light emitting diode are substantially rotationally symmetric around the center axis of the light emitting diode.
- Claim 4 (Original):** The illumination device of claim 1, wherein the number of light guides includes two light guides.
- Claim 5 (Original):** The illumination device of claim 1, further comprising a light guide fixture formed to mate with the light guides, wherein the light guide fixture positions the light guides at the offset locations relative to the center axis of the light emitting diode.

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Claim 6 (Original): The illumination device of claim 5, wherein the light guide fixture is positioned adjacent the light emitting diode.

Claim 7 (Original): The illumination device of claim 5, wherein the light guide fixture is a housing that houses the light emitting diode.

Claim 8 (Original): The illumination device of claim 1, wherein at least one of the light guides provides directional side lighting in a first direction and wherein at least another of the light guides provides directional side lighting in a second direction.

Claim 9 (Previously Presented): An illumination device comprising:
a light emitting diode that emits a radiation pattern, wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode;
and

at least one light guide positioned to be illuminated by the light emitting diode, the light guide positioned at an offset location relative to the center axis of the light emitting diode, wherein the light guide is positioned such that a cross-sectional center of the light guide substantially corresponds to a location of the maximum luminous intensity of the radiation pattern of the light emitting diode.

Claim 10 (Previously Presented): The illumination device of claim 9, further comprising a plurality of light guides positioned such that cross-sectional centers of each of the light guides substantially corresponds to locations of the maximum luminous intensity of the radiation pattern of the light emitting diode, wherein each of the plurality of light guides provides directional side lighting in a unique direction.

Claim 11 (Original): The illumination device of claim 9, further comprising a light guide fixture formed to mate with the light guide, wherein the light guide fixture positions the light guide at the offset location relative to the center axis of the light emitting diode.

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Claim 12 (Original): The illumination device of claim 11, wherein the light guide fixture is positioned adjacent the light emitting diode.

Claim 13 (Original): The illumination device of claim 11, wherein the light guide fixture is a housing that houses the light emitting diode.

Claim 14 (Previously Presented): An illumination device comprising:
a light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode;
a light guide fixture, the light guide fixture formed to mate with light guides,
a first light guide having a first end mated with the light guide fixture, wherein the first end of the first light guide is positioned at a first offset location relative to the center axis of the light emitting diode, wherein the first end of the first light guide is positioned such that a cross-sectional center of the first light guide substantially corresponds to a first location of the maximum luminous intensity of the radiation pattern of the light emitting diode,
a second light guide having a first end mated with the light guide fixture, wherein the first end of the second light guide is positioned at a second offset location relative to the center axis of the light emitting diode, wherein the first end of the second light guide is positioned such that a cross-sectional center of the second light guide substantially corresponds to a second location of the maximum luminous intensity of the radiation pattern of the light emitting diode.

Claim 15 (Previously Presented): The illumination device of claim 14, wherein each of the first and second light guides provide directional side lighting in a unique direction

Claim 16 (Previously Presented): The illumination device of claim 14, wherein the first and second locations of the maximum luminous intensity of the radiation pattern of the light emitting diode are substantially rotationally symmetric around the center axis of the light emitting diode.

Claim 17 (Previously Presented): The illumination device of claim 14, wherein the light guide fixture is positioned adjacent the light emitting diode.

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Claim 18 (Previously Presented): The illumination device of claim 14, wherein the light guide fixture is a housing that houses the light emitting diode.

Claim 19 (Previously Presented): The illumination device of claim 14, wherein the light emitting diode is a first light emitting diode and the light guide fixture a first light guide fixture, the illumination device further comprising:

a second light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern of the second light emitting diode is displaced relative to a center axis of the second light emitting diode;

a second light guide fixture, the second light guide fixture formed to mate with light guides,

wherein the first light guide has a second end mated with the second light guide fixture, wherein the second end of the first light guide is positioned at a first offset location relative to the center axis of the second light emitting diode, and

wherein the second light guide has a second end mated with the second light guide fixture, wherein the second end of the second light guide is positioned at a second offset location relative to the center axis of the second light emitting diode.

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Claim 20 (Original): The illumination device of claim 19, wherein the first end of the first light guide is positioned such that a cross-sectional center of the first light guide substantially corresponds to a first location of the maximum luminous intensity of the radiation pattern of the first light emitting diode,

wherein the first end of the second light guide is positioned such that a cross-sectional center of the second light guide substantially corresponds to a second location of the maximum luminous intensity of the radiation pattern of the first light emitting diode,

wherein the second end of the first light guide is positioned such that a cross-sectional center of the first light guide substantially corresponds to a first location of the maximum luminous intensity of the radiation pattern of the second light emitting diode, and

wherein the second end of the second light guide is positioned such that a cross-sectional center of the second light guide substantially corresponds to a second location of the maximum luminous intensity of the radiation pattern of the second light emitting diode.

Claim 21 (Original): The illumination device of claim 19, wherein the first light guide fixture is positioned adjacent the first light emitting diode, and wherein the second light guide fixture is positioned adjacent the second light emitting diode.

Claim 22 (Original): The illumination device of claim 19, wherein the first light guide fixture is a housing that houses the first light emitting diode, and wherein the second light guide fixture is a housing that houses the second light emitting diode.

Claim 23 (Original): The illumination device of claim 15, wherein the first light guide provides directional side lighting in a first direction, and wherein the second light guide provides directional side lighting in a second direction.

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Claim 24 (Previously Presented): An illumination device comprising:
a light emitting diode that emits a radiation pattern, wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode;
a number of light guides; and
means for positioning each light guide at offset locations relative to the center axis of the light emitting diode such that a cross sectional center of each light guide substantially corresponds to locations of the maximum luminous intensity of the radiation pattern of the light emitting diode.

Claim 25 (Previously Presented): The illumination device of claim 24, wherein each of the light guides provide directional side lighting in a unique direction.

Claim 26 (Previously Presented): A sign comprising:
a frame;
a light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode, wherein the light emitting diode is housed within the frame; and
a number of light guides positioned to be illuminated by the light emitting diode, each light guide positioned at offset locations relative to the center axis of the light emitting diode, wherein the frame is formed with holes and the each light guide protrudes through at least one of the holes, wherein each light guide is positioned such that a cross-sectional center of each light guide substantially corresponds to locations of the maximum luminous intensity of the radiation pattern of the light emitting diode.

Claim 27 (Canceled).

Claim 28 (Original): The sign of claim 26, wherein the locations of the maximum luminous intensity of the radiation pattern of the light emitting diode are substantially rotationally symmetric around the center axis of the light emitting diode.

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Claim 29 (Original): The sign of claim 26, wherein each light guide provides directional side lighting in a unique direction.

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Claim 30 (Previously Presented): A sign comprising:

a frame;

a first light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the first light emitting diode;

a first light guide fixture, the first light guide fixture formed to mate with light guides, wherein the first light emitting diode and the first light guide fixture are housed in the frame;

a first light guide having a first end mated with the first light guide fixture, wherein the first end of the first light guide is positioned at a first offset location relative to the center axis of the light emitting diode;

a second light guide having a first end mated with the first light guide fixture, wherein the first end of the second light guide is positioned at a second offset location relative to the center axis of the first light emitting diode;

a second light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the second light emitting diode; and

a second light guide fixture, the second light guide fixture formed to mate with light guides,

wherein the first light guide has a second end mated with the second light guide fixture, wherein the second end of the first light guide is positioned at a first offset location relative to the center axis of the second light emitting diode,

wherein the second light guide has a second end mated with the second light guide fixture, wherein the second end of the second light guide is positioned at a second offset location relative to the center axis of the second light emitting diode,

wherein the frame is formed with holes and wherein the first and second light guides pass through the holes, and

wherein the first and second light guides are positioned such that a cross-sectional center of each light guide substantially corresponds to locations of the maximum luminous intensity of the radiation pattern of each of the light emitting diodes.

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Claim 31 (Previously Presented): The sign of claim 30, wherein each of the light guides provide directional side lighting in a unique direction.

Claim 32 (Original): The sign of claim 31, wherein the locations of the maximum luminous intensity of the radiation pattern of the light emitting diode are substantially rotationally symmetric around the center axis of the light emitting diode.

Claim 33 (Previously Presented): A method comprising:
positioning a number of light guides next to a light emitting diode that emits a radiation pattern wherein a maximum luminous intensity of the radiation pattern is displaced relative to a center axis of the light emitting diode, each light guide being positioned such that a cross-sectional center of each light guide substantially corresponds to locations of the maximum luminous intensity of the radiation pattern of the light emitting diode; and
illuminating the light guides with the light emitting diode.

Claims 34-38 (Canceled).

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